THE IMPAC OF HORTICULTURAL AND AGRICULTURAL MINERAL OILSN TO THE FEEDING AND OVIPOSITION BEHAVIOUR OF *DIPORINA CITRI KUWAYAMA*
(Hemiptera: Psyllidae)

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04/2316/SPN/00188
TH 2010

Abstract

Its role as a vector of huanglongbing disease has made *Diaphorina citri* the most important pest in citrus culture in Asia and America. Oils with carbon number *n*C21 (horticultural mineral oil) and *n*C24 (agricultural mineral oil) were promising control agent of *D. citri*. Research was conducted to determine the effectiveness and the plausible mechanisms contributing these oils in suppressing *D. citri* population. The effect of oils in reducing the population of *D. citri* was evaluated under field condition using huanglongbing disease free trees and trees of unknown disease status. Oils, insecticides used in farmer practice and imidacloprid were applied on citrus trees. Oils were able to reduce the infestation of *D. citri* as much as imidacloprid. The population on those treatments was low and needed longer time for the initial infestation. The mechanisms of oils in reducing *D. citri* population were evaluated in choice and non-choice trials. Oils application reduced the proportion of *D. citri* stayed for feeding and for laying eggs. It was mainly governed by olfactory response. Number of egg per bud, fecundity, hatchability of egg and survivorship of nymph also decreased with the increase of oils concentration. Those results could be used for recommending mineral oils for controlling *D. citri* replacing conventional insecticides.